

GUJARAT TECHNOLOGICAL UNIVERSITY**M. E. Sem. – IInd - Examination – June/July- 2011****Subject code: 1721104****Subject Name: Automotive Chassis & Body Engineering****Date: 27/06/2011****Time: 10:30 am – 01:00 pm****Total Marks: 70****Instructions:**

1. Attempt all questions.
2. Make suitable assumptions wherever necessary.
3. Figures to the right indicate full marks.

Q.1 (a) What is wind tunnel? Enlist various types of wind tunnels and explain any one with neat sketch. **07**

(b) Explain terms: (i) dash board (ii) bonnet (iii) boot. **07**

Q.2 (a) Explain typical car body construction with neat sketch. **07**

(b) Write short note on driver's visibility with neat sketch. **07**

OR

(b) Explain preliminary design of vehicle bodies. **07**

Q.3 (a) Explain design of automobile body for safety. **07**

(b) Write short note on "Chassis frame design" **07**

OR

Q.3 (a) State and explain various forces and moments acting on auto vehicle. **07**

(b) Explain in brief flow visualization techniques. **07**

Q.4 (a) List different vehicle body materials and explain any three of them. **07**

(b) Write short note on Vehicle Aerodynamics. **07**

OR

Q.4 (a) Explain shear panel method for vehicle body design. **07**

(b) Explain stress analysis of bus body structure under bending and torsion. **07**

Q.5 (a) Differentiate between symmetric and asymmetric vertical loads in a car. **07**

(b) Explain distribution of load on vehicle structure. **07**

OR

Q.5 (a) Explain classification of automobile coach work. **07**

(b) Explain the general requirements of automobile body. **07**
